



MISSOURI BOTANICAL GARDEN

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GEORGE ENGELMANN BOTANICAL NOTEBOOKS

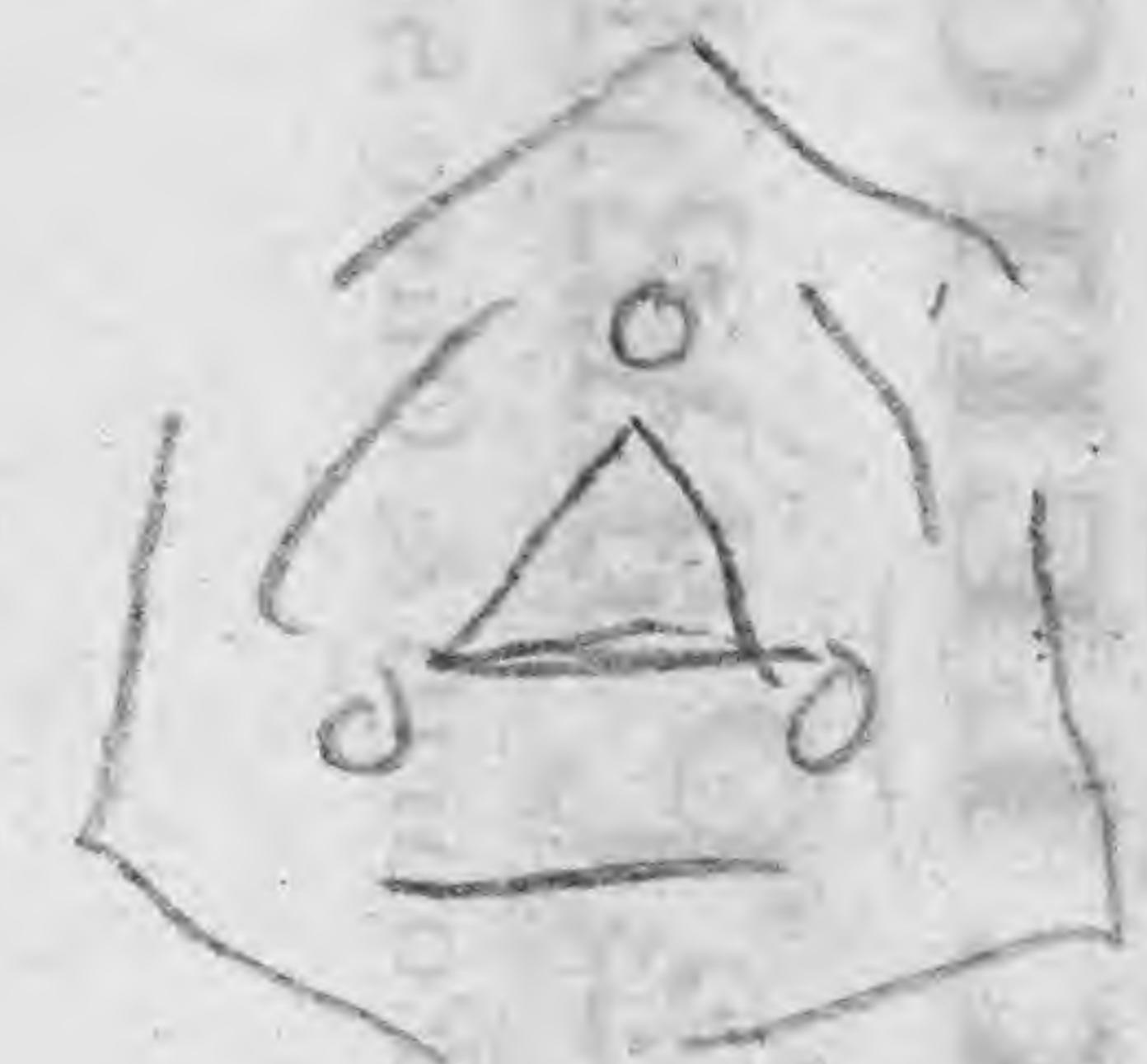
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Linnaea

11 Aug 1865

scarcey in flower

Galveston 1865 No 78



CHAS. E. BREWER. 1865
MISSOURI BOTANICAL GARDEN



0 1 2 3 4 5 6 7 8 9 10

cm

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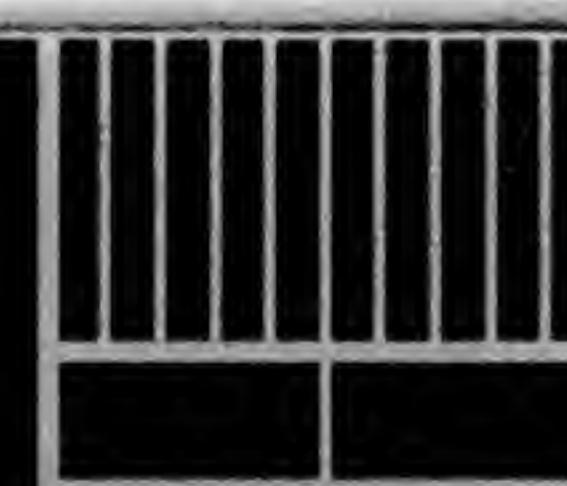
MISSOURI
BOTANICAL
GARDEN



Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

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GEORGE ENGELMANN PAPERS

9529



0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI
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Immacul.

Houston. June 1843

P. about 50 in a head

Aug 11 1865

$\times 60$

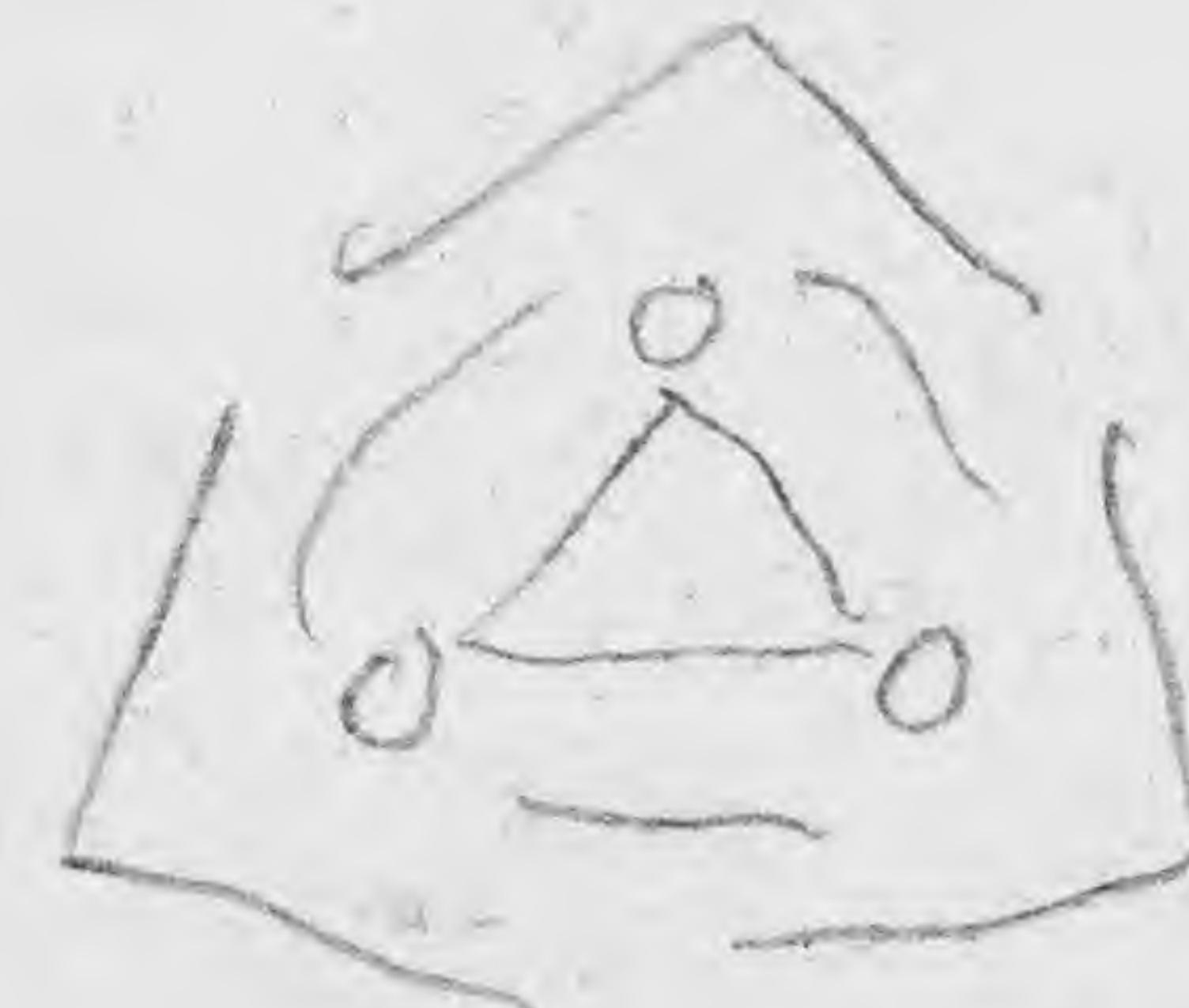


strongly ribbed,
the cross veins less
distinct

$\times 60$



in oil



0 1 2 3 4 5 6 7 8 9 10

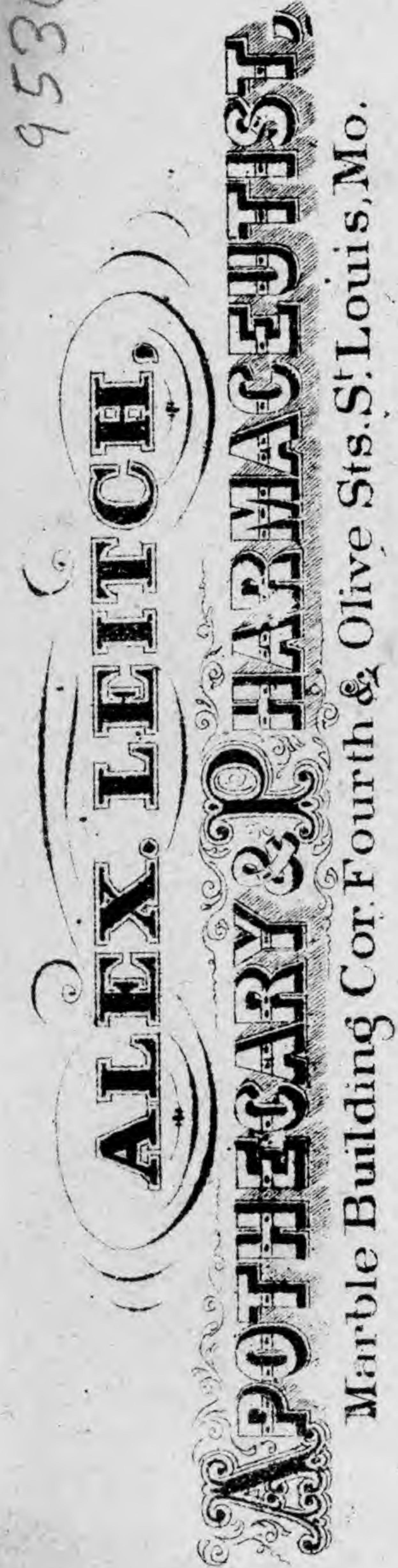
cm

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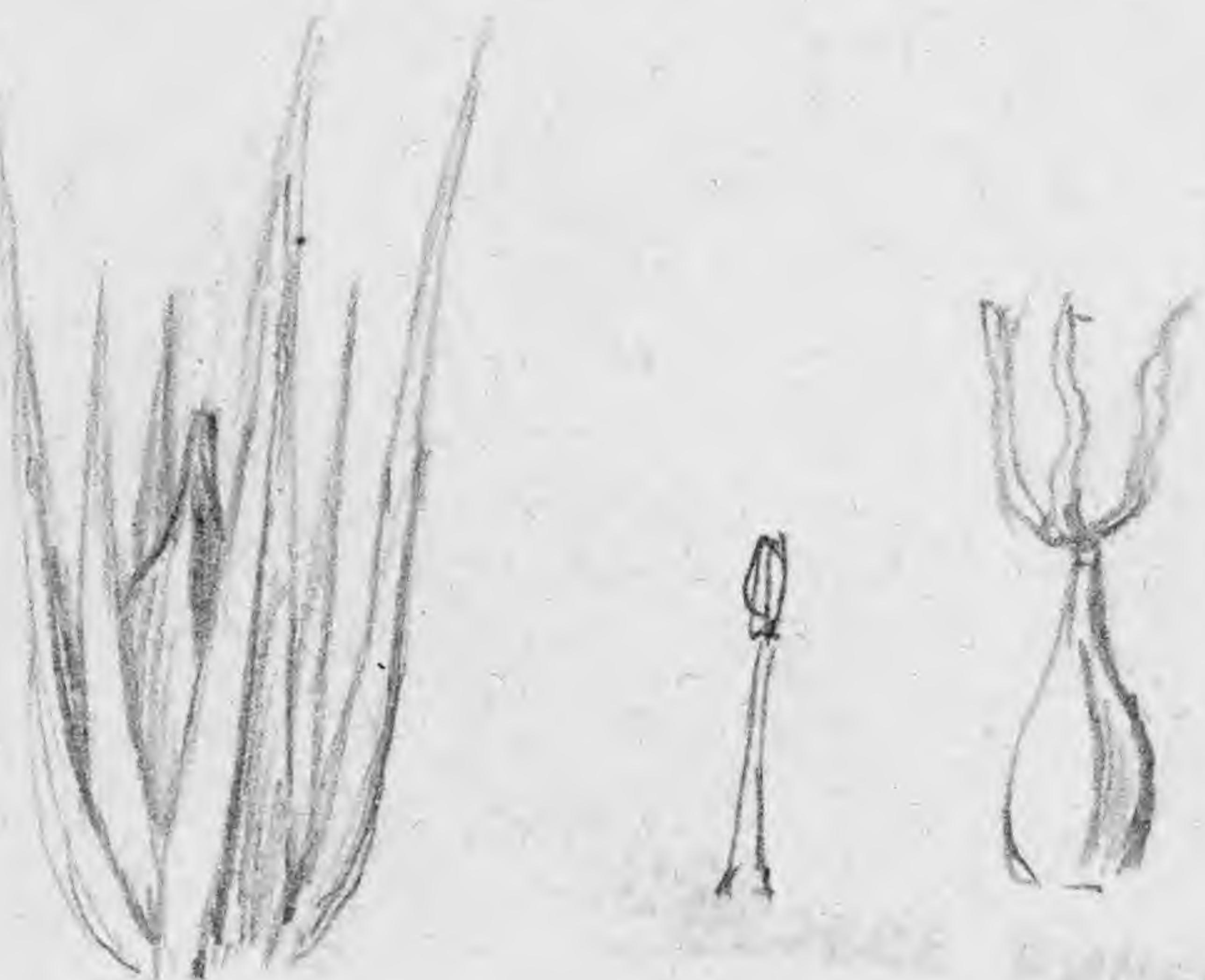
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Imperas

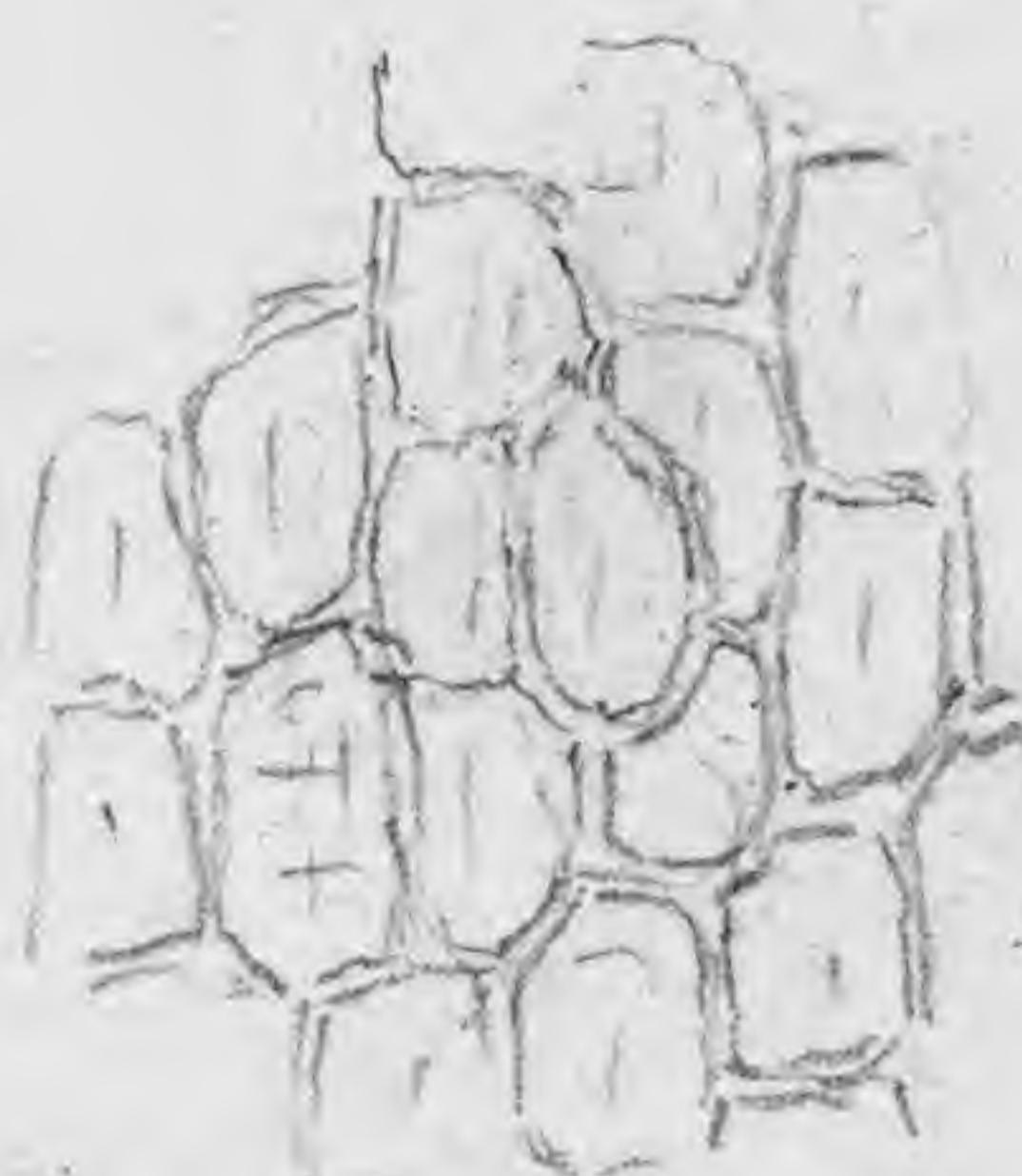
Sept 1st 1865

Athena Ill. E Hall

x 60



x 60



x 150

5-6 mm

areae sometimes
sometimes with very light crosshatching
smoothish distinct only near the ribs

Sept 27 1867

Hall Aug. 3d. 1867



0 1 2 3 4 5 6 7 8 9 10

cm

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DRUGGIST, APOTHECARY AND CHEMIST,
APOTHECARY AND CHEMIST,
Marble Building, cor. 4th and Olive Sts.,
ST. LOUIS, MO.

MISSOURI BOTANICAL GARDEN
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1856



0 1 2 3 4 5 6 7 8 9 10

cm

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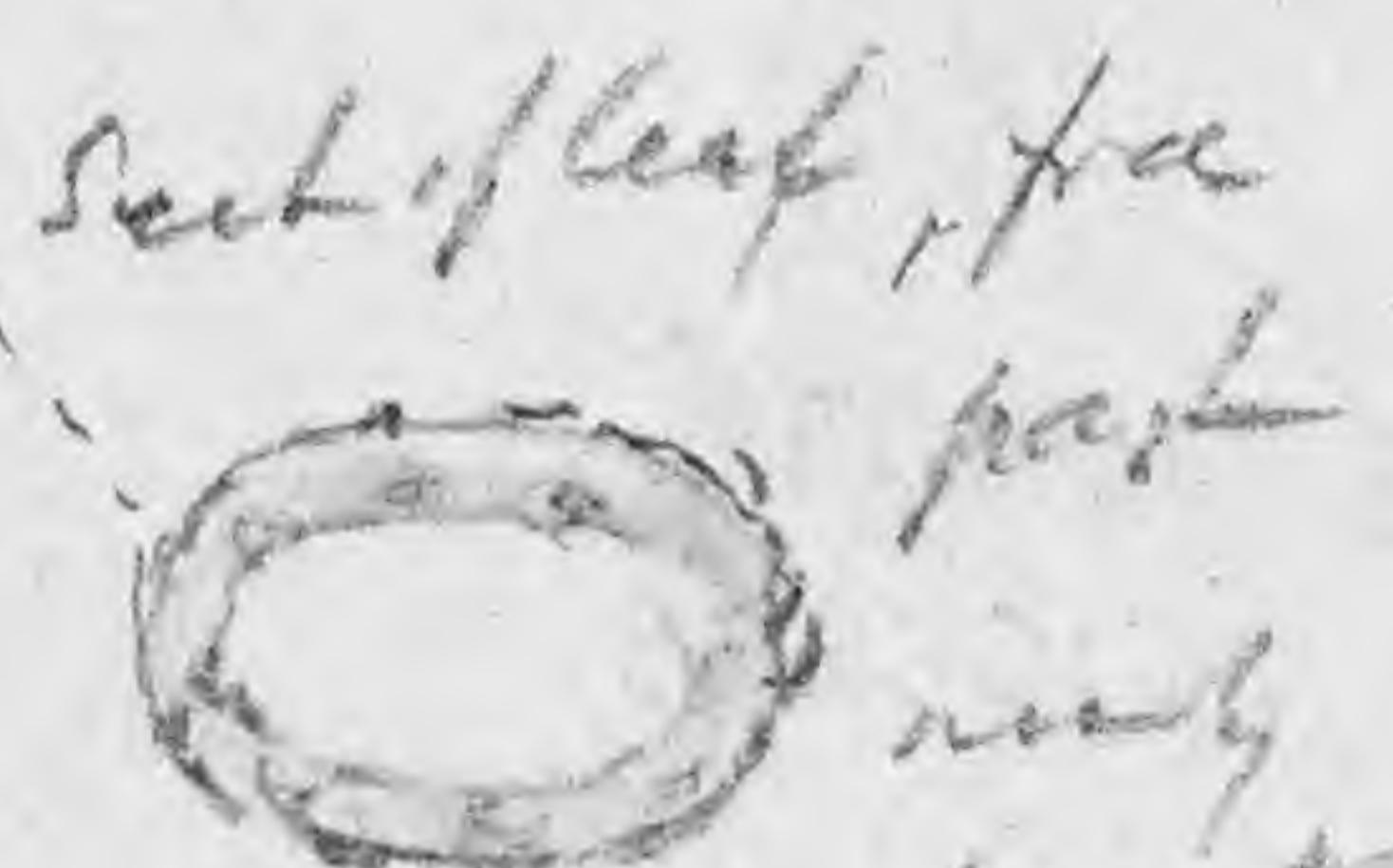
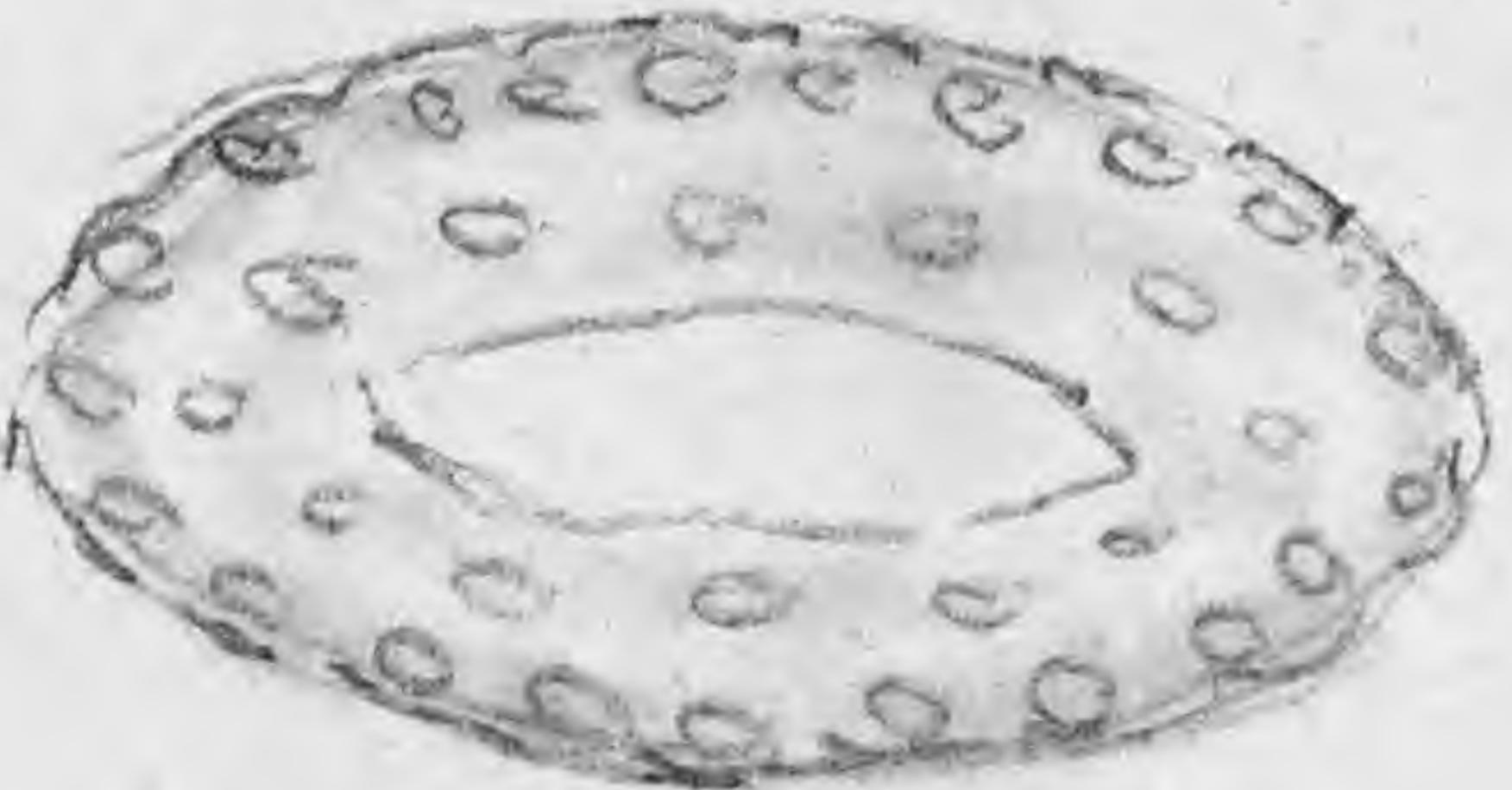
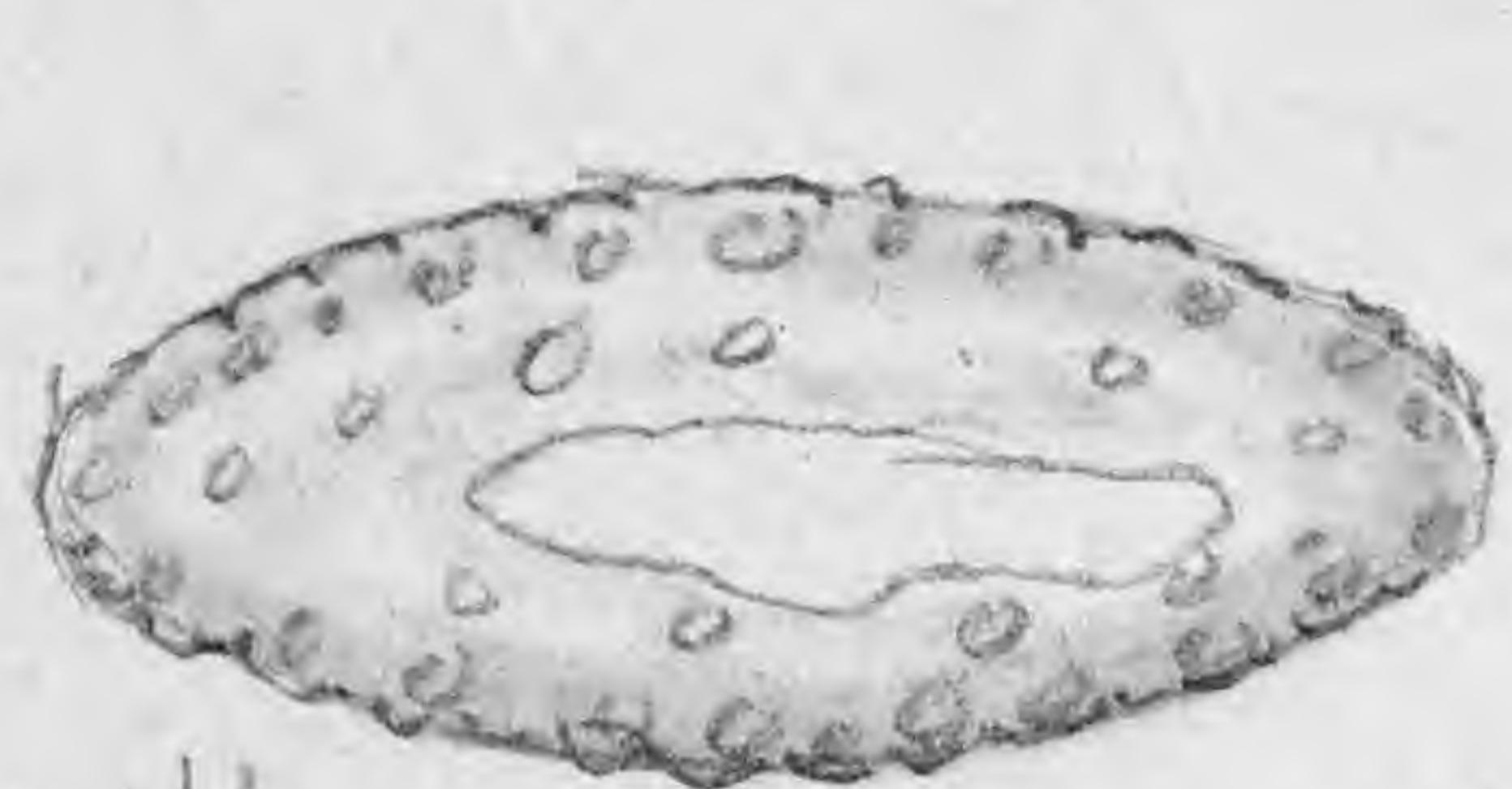
Immons

Jan 7 1866

Memphis City

Bolander Oct 1865

sections of stems x 10



part of
a large
leaf x 10

part of leaf at
veinal pub



part of a
small leaf

x10



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cm

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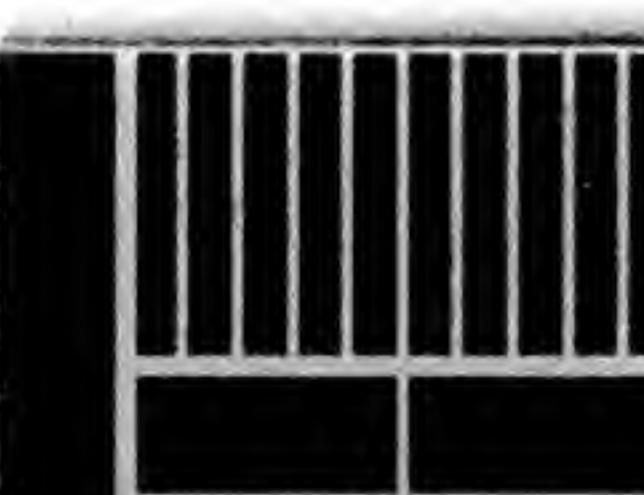


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2856

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0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI
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III articulati
3 Capitati

527-632



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cm

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39 J. Bolander

fuscus castaneus

piniformis

sub rectifolius

perhaps too near a trinodos

Mertensian?

or ensifolius?

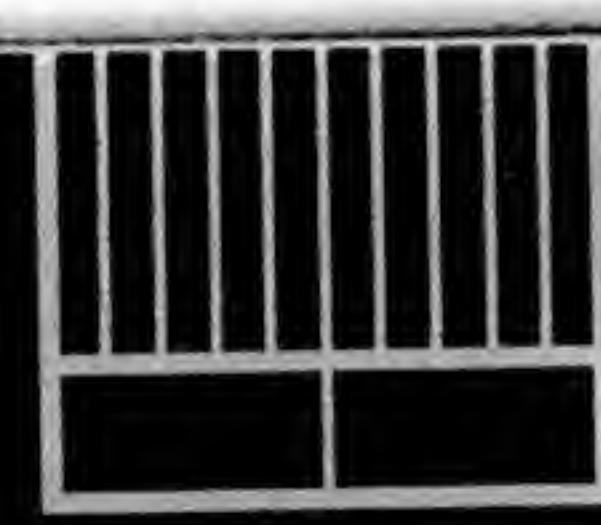
527-8

ering.

Dimensions.—Length, 0.20 of an inch; width, 0.18. The *Elaeacrinus Kirkwoodensis* is nearly allied to *E. (Pentremites) melo*, from which it is distinguished by its much smaller size and less deeply excavated base. It also occupies a higher geological position.

Occurs in the St. Louis Limestone (Carboniferous) on the Pacific railroad near Kirkwood, St. Louis county, Missouri.

8



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cm

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32 JOURNAL OF EXCURSIONS IN REGARD TO MINERALS AND PETROGRAPHY AND POSITION OF LIGHT. They exhibit double refraction quite plainly.

The locality of the mineral is near lat. $39^{\circ} 40'$ long. 30' west of Greenwich, west of south of Salt Lake, in the as' range of mountains, on Capt. Simpson's return trail.

Circumstances prevented me from obtaining more than crystals, which are now deposited in the collection of the Smithsonian Institute; a few others are also in the hands of members of the party. We were travelling at the time by forced night marches with nearly worn out animals, seeking to gain a spring of water in a distant range of mountains. This desert was then entirely unexplored. I have but little doubt that more interesting materials are to be found at the same point.

The mountains of the former Territory of Utah promise a rich yield to the mineralogist. We know already of gold and silver ores in the east, west and south part of that district; of copper and lead ores in the south, and I have discovered the latter also in the centre of it; of specular iron ores and native sulphur in the Rocky Mountains and near Little Salt Lake; of rock salt in the mountains south-east of Utah Lake; of native alum near Salt Lake; of various other salts in the deserts; and of silicates, composing the granites, porphyries, diorites, trachytes, and lavas, nearly over the whole area.



0 1 2 3 4 5 6 7 8 9 10
cm

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Imos

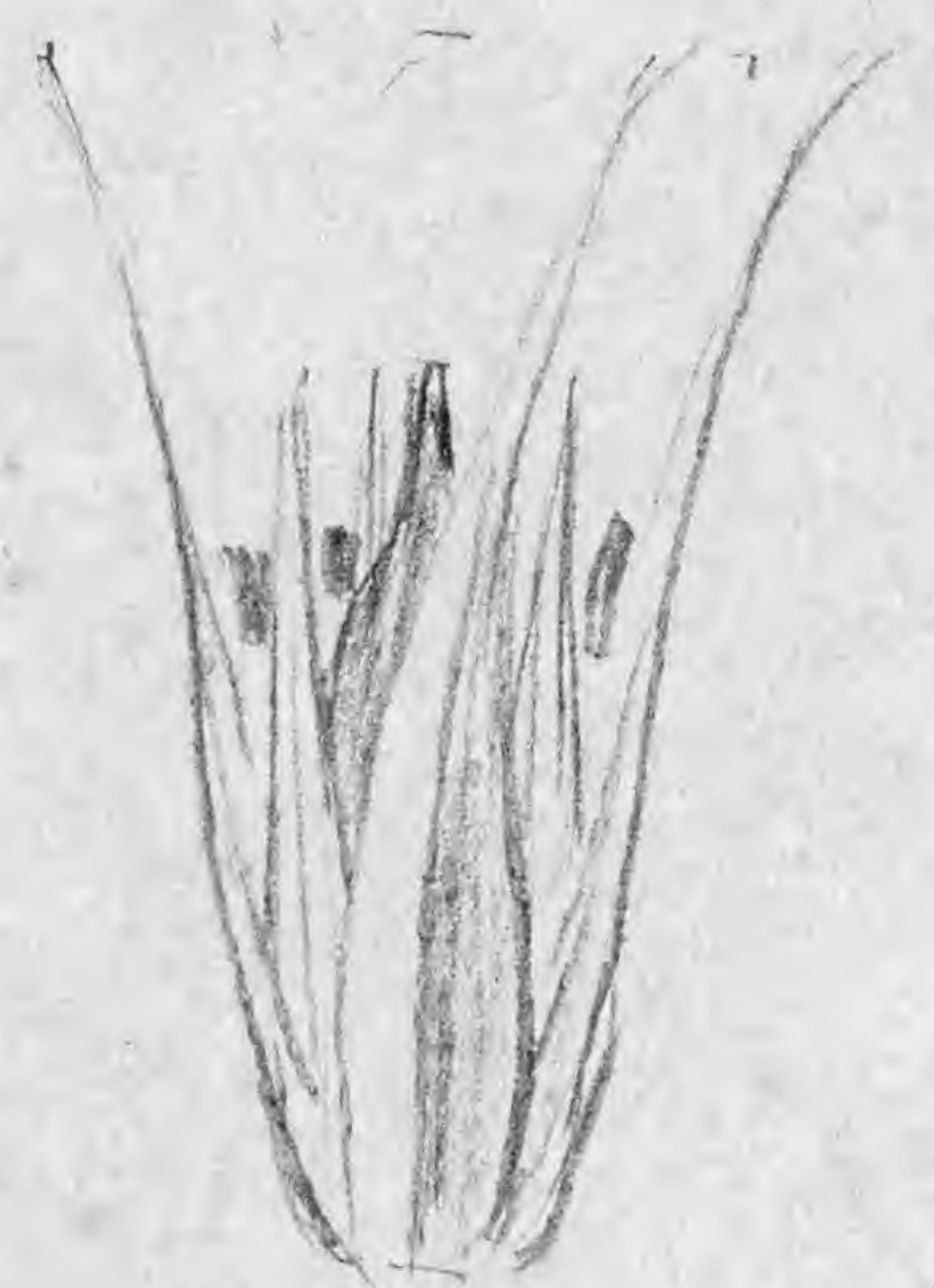
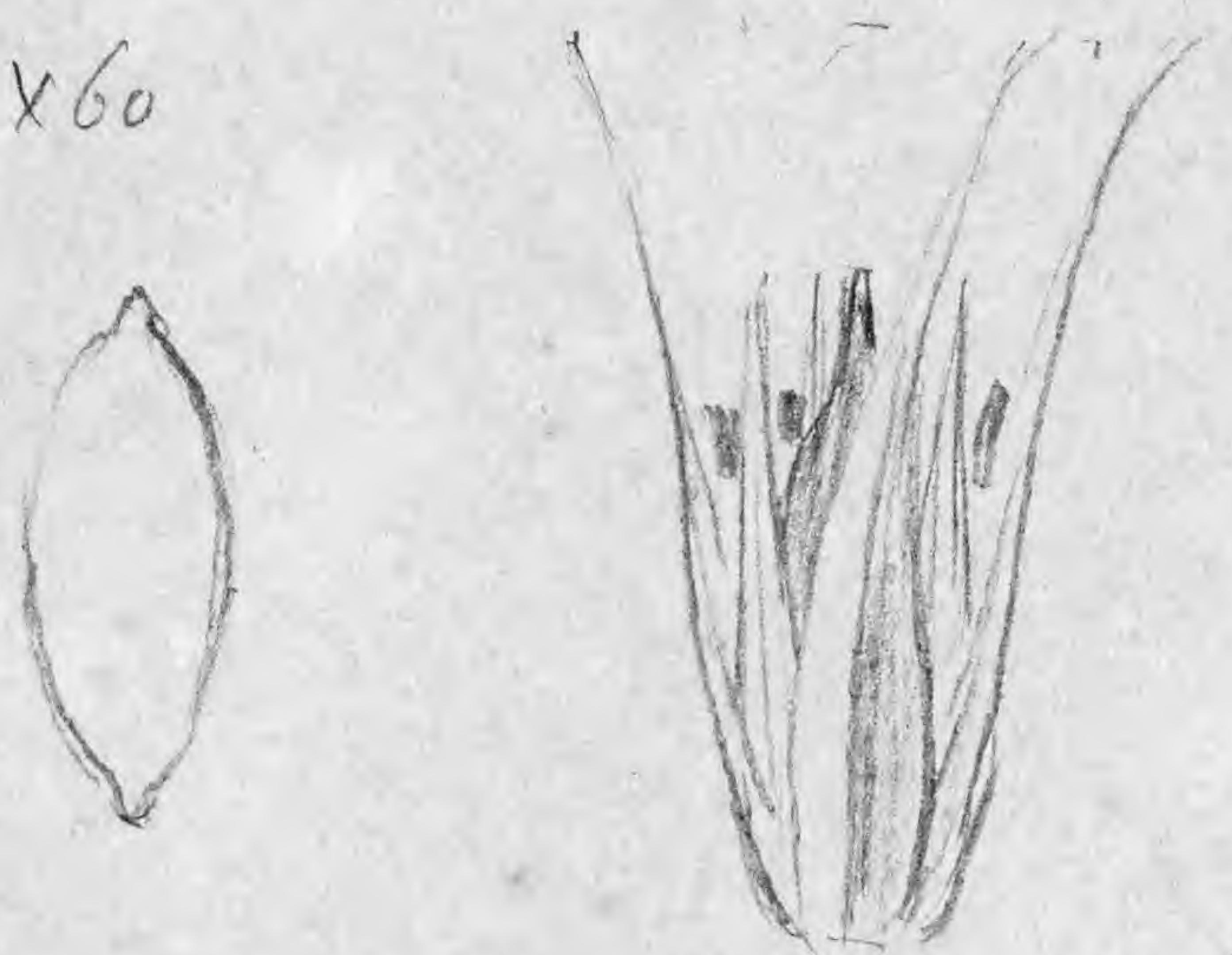
Sept 30 1865

malamoras, Bedderia 2556

April 1854

x10

x60



soaked

capsula sepa
stoma aequa.



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589b



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Immun ~~ensifol~~?

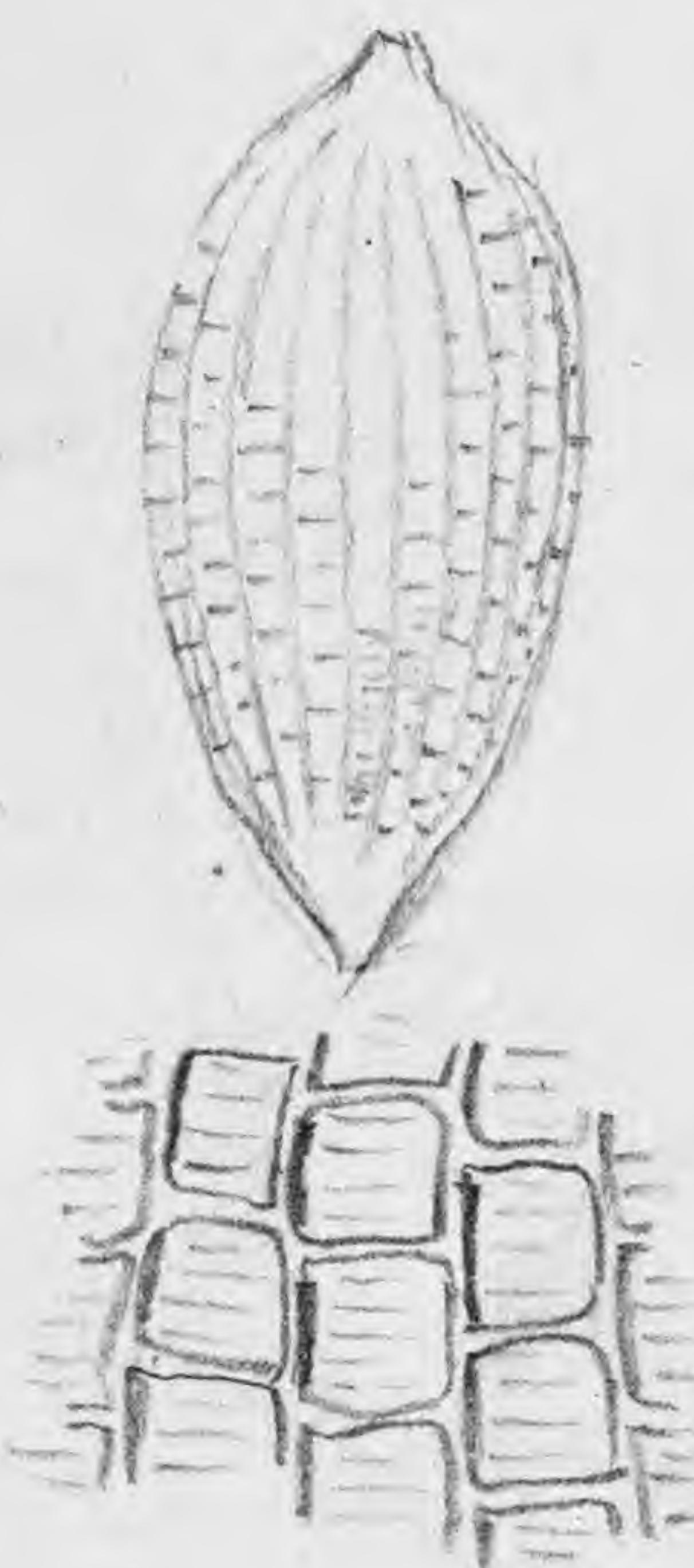
Jan 4 1866

Mandeville City

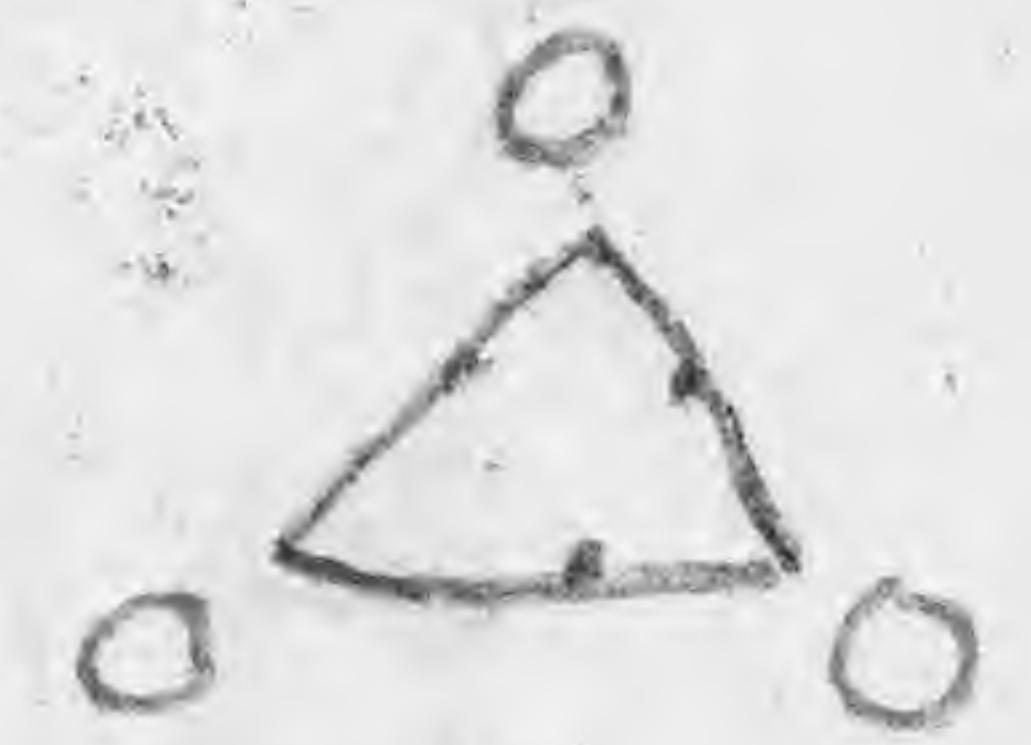
46 Duleme Oct 1865

capitula in cliff flora (30-50)

flexuoso subspicata?



flora sessile



scapa lanuginosa sub-lata - obtusinervia
exteriora ^{rapae} paniculata Grevillea ramosissima
capsula clavata aperte exserta
obtusinervia

with the exception of the leaves very much like ensifolius,
Oregon, dyall

figured Oct 1865 but parts of flower different, anthers & capsule
seem the same



0 1 2 3 4 5 6 7 8 9 10

cm

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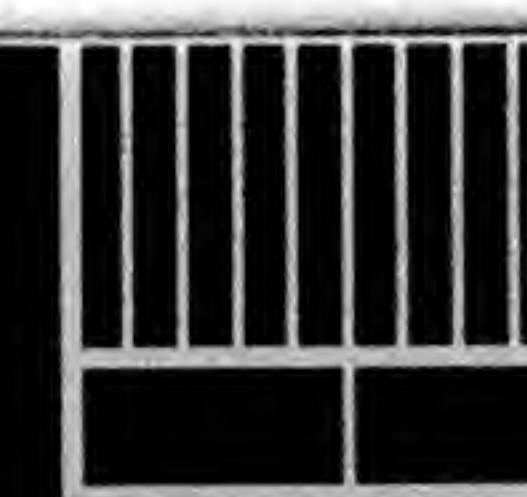


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0 1 2 3 4 5 6 7 8 9 10

cm

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	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861	32.2	40.4	44.8	58.1	64.1	76.9	77.5	78.6	69.1	57.9	46.0	39.7	57.1° F.
1862	28.9	30.2	43.2	55.0	69.7	75.1	81.2	80.7	72.1	57.3	42.6	41.3	56.4° F.

RELATIVE HUMIDITY.

	Jan.	Feb.	Mar.	Ap'l.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean of Year.
1861	72.2	63.3	64.5	61.5	66.3	70.8	66.3	69.6	77.3	76.6	69.0	74.3	69.5
1862	85.3	73.9	70.8	67.0	57.3	67.0	66.8	64.3	74.2	67.2	69.5	74.6	69.8

III. *Yearly mean of Positive Electricity, of Temperature, and of Relative Humidity of the Atmosphere, at the hours of 6, 9, 12, 3, 6 and 9, from morning till night, based upon daily observations at these hours through the years 1861 and 1862, at St. Louis, Mo.*

ELECTRICITY.

	At 6 A.M.	At 9 A.M.	At 12 M.	At 3 P.M.	At 6 P.M.	At 9 P.M.
1861	8.6	10.0	9.2	7.9	8.7	6.9
1862	8.9	10.0	9.1	7.3	8.1	6.8

TEMPERATURE.

	1861	1862	At 6 A.M.	At 9 A.M.	At 12 M.	At 3 P.M.	At 6 P.M.	At 9 P.M.
	48.9° F...	48.9° F...	54.9	55.0	61.6	63.6	59.3	54.3

RELATIVE HUMIDITY.

	1861	1862	At 6 A.M.	At 9 A.M.	At 12 M.	At 3 P.M.	At 6 P.M.	At 9 P.M.
	86.4	85.3	71.3	70.6	60.3	57.2	65.1	77.3

529.535



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Dec.....	112	191	211	230	259	265	351	550	S.E.	50

V. Positive or Negative Electricity in the Observations of '61 & '62.

	Positive Electricity.		Negative Electricity.		No Electricity, or 0.		Highest Positive Electricity.	
	1861.	1862.	1861.	1862.	1861.	1862.	1861.	1862.
Jan.....	179	179	3	5		2	40°	40°
Feb.....	162	166	6	2			34	33
March ...	168	179	15	8			30	48
April ...	157	157	12	22	1	1	33	52
May ...	171	180	17	5	1	3	25	32
June ...	162	143	5	2	8	20	16	21
July....	183	153	3	8	1	24	14	11
August...	176	143	5	4	6	40	15	19
Sept....	169	117	1	1	1	10	61	18
Oct.....	162	143	4	3	20	41	33	23
Nov....	172	157	2	7	6	16	42	35
Dec....	175	166	5	0	6	17	37	35
	2046	1883	78	67	59	225	42°	52°



0 1 2 3 4 5 6 7 8 9 10
cm

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Immos brachycarpus

	<u>Blad</u>	<u>Guy</u>	<u>Anglou</u>
Michigan			
Central Ohio		Folwell	(Folwell)
		Sullivan	
Illinoian: Marion City		Babb	Babb
Renard Co		Hall	Hall
St. Clair			Cugler
Mississippi			Higgin
Louisiana		Hale	(Hale)
Texas		Berkman	Lindley
	Bed. 1569	Aug. 313. 1569	Aug. 2556
		1573	

Provins
Heatucky Short
Indiana for Babb.
North Carolina ~~Carolina~~
~~fire away notes~~
Charleston S. C. Beaufort
1866 H. D. Mission
sub no characters

Short rost stock



0 1 2 3 4 5 6 7 8 9 10
cm

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DALECK & LURITZ

APOTHECARY & PHARMACEUTIST,

COR. 4TH & OLIVE STS., ST. LOUIS.

MISSOURI BOTANICAL GARDEN
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825b



0 1 2 3 4 5 6 7 8 9 10

cm

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J. brachys

Palmer May & Jan - i. fl. Texas April

seed are smooth, ridges visible on the
s. that the cross sections appear to extend across
the area -

Seed not distinct from *J. scirpoides*.



0 1 2 3 4 5 6 7 8 9 10

cm

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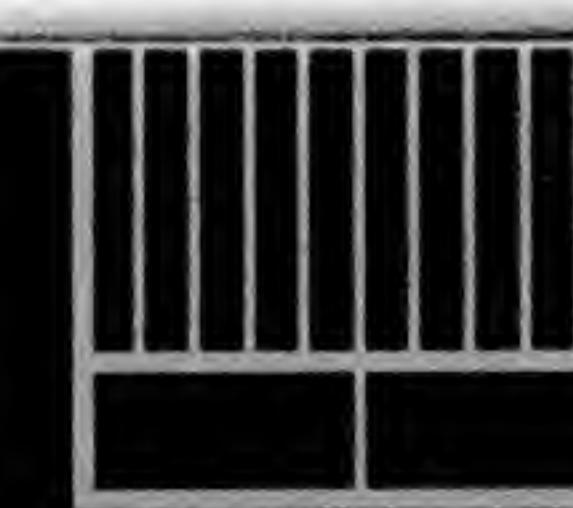


MISSOURI
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Eugene L. MASSOT,
DISPENSER OF
PURE MEDICINES,
THE FINER CHEMICALS,
And Reliable Pharmaceutical Preparations,
CORNER OF FOURTH AND SPRUCE STREETS,
ST. LOUIS, MO.

b356

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cm

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J. simplicifolius Lam
J. polycephalus Michx

50

REVIEW OF MEDICAL LITERATURE.

536-601

granules, which are sometimes isolated, or more frequently connected together in groups by a pale substance, soluble in acetic acid and caustic alkalies. True pigment cells are observed along with the granules and granular masses, though in somewhat smaller quantity. They resemble in size and form the colorless corpuscles of the blood, or they consist of large spindle or club-shaped cells and rounded nuclei, with sharply defined walls. These cells contain a greater or smaller number of black granules. The color of the pigment is usually deep black, more rarely brown or ochre-colored, and, less frequently of all, reddish yellow.

"It is thought by most observers that this pigment matter is formed in the spleen. Dr. Frerichs is of opinion that, though there are many reasons for such a belief, there is no proof that it may not be formed in other portions of the vascular system. He believes, however, that there is no doubt the larger portion of the pigment is formed in the spleen.

"In malarial disease, particularly, there is every reason to suppose that the spleen is the principal seat of formation of the pigment. During the congestions of that organ, which so constantly occur in this disease, the stagnation of the blood in the venous sinuses gives rise to changes which result in the formation of pigment in the masses of stagnant blood. Frerichs supposes that the club and spindle-shaped pigment cells are the epithelium of the lining membrane of the sinuses infiltrated with the decomposed red matter of the blood, that the globular pigment cells are colorless blood corpuscles infiltrated with molecules of coloring the broken-up fragments of the coagulum.



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REVIEW OF MEDICAL LITERATURE.

49

nitrogenous compounds is not always increased *absolutely*, but often falls below the normal standard. Hence, the law that fever consists in an abnormal increase of general metamorphosis must be interpreted to mean a *relative* increase. In some fever-patients the daily waste of substance is less than it had been in the same individual during health; but still greater than it would be under entirely similar circumstances in the absence of fever. For this reason, also, we can regard as pathognomonic of fever neither the increase of consumption nor the increase of the production of heat, but only the resulting elevation of temperature, which takes place in all cases of fever, without exception. After solving the apparent paradox of a want of correspondence between the production of heat and the metamorphosis of matter, and referring to febrile consumption as the probable cause of marasmoid conditions, the author concludes:

"The most important result of the above consideration is



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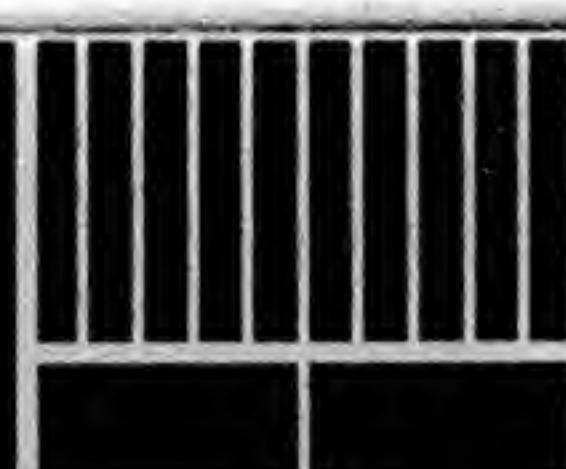
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15. junc scirpoïde, Juncus scirpoïdes. Juncus
foliis teretibus articulatis, capitulis globo-
sis echinatis, panicula subsimplici. N.

See Gramen cyperoides, & Pluck t. 417. f. 3.

Je soupçonne que ce Junc est le même que
le Juncus nodosus de Linné; sa description
s'y rapporte assez, & il est originaire du même
pays ou à peu près, mais assurément la syn-
onymie que Linné joint à sa plante, ne con-
vient nullement à la mienne. Cette synony-
mie appartient à l'espice suivante; & celle-ci
a ses têtes de fleurs fort bien rendues dans
la figure que je cite de Pluknet.

Sa tige est cylindrique, garnie de quelques
feuilles, & haute de douze à quinze pouces.
Les feuilles sont cylindriques-subulées, arti-
culées, glabres, & d'un vert clair un peu
glaucque ainsi que toute la plante. Les
feuilles inférieures sont moins articulées,
& ont leurs articulations plus rares, moins
nettes, & moins apparentes. La panicule
est médiocre, terminale, simple ou presque



0 1 2 3 4 5 6 7 8 9 10
cm

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simple, & formée par cinq ou six têtes presque sphériques, échiniées, portées sur des pédoncules inégaux. Ces têtes sont composées de douze à dix-huit fleurs sessiles, divergentes, verdâtres, & remarquables par les pointes subulées, roides, presque spinuliformes, qui terminent les folioles de leur calice. Les bractées sous les têtes de fleurs sont membranueuses à leur base, & subulées à leur sommet. Lorsque tous les pédoncules sont simples, comme dans la figure citée de Bluckinet, ils forment une espèce d'ombelle, mais inégale parce qu'un de ces pédoncules est toujours plus court que les autres; quelquefois il s'en trouve un plus grand, qui soutient une seconde ombelle semblable à la première. Cette plante croît dans la Caroline méridionale, d'où elle en été rapportée par M. Fraser, qui nous l'a communiquée. (v. s.)

I have examined the flowers of the same Fraser's specimen; and they belong to what I name I. scorpioides d. macrostachys a brachystylus, septis ext. longioris.

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cm

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Immos "scoparia"

Aug 10, 1865

mississippi, E Hilgard

[With Carolin Curtis] #

• x60



about 6 striae

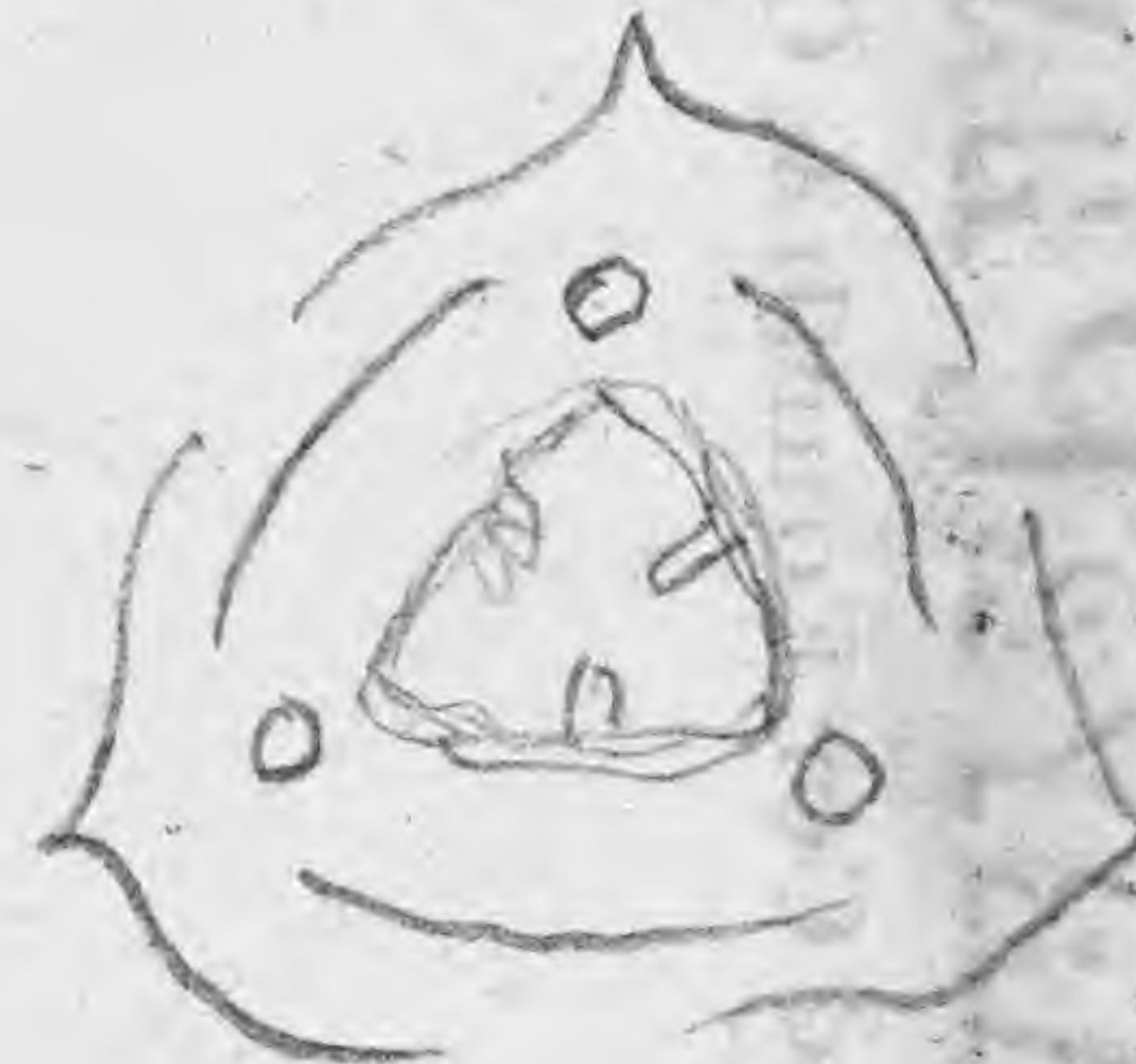
x 10



capsule

heads with over 100
flowers

style short



Sketch

St Louis June 1834 is the same, heads & flowers a little smaller
about 30 - 40 flowers - each head

*this is probably an error - I can not find any specimen compared

April 1866



0 1 2 3 4 5 6 7 8 9 10

cm

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**ALEX. LEITCH,
APOTHECARY & PHARMACEUTIST**

Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

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cm

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Seeds of *I. microstoma*

5-7 ribs visible

I. macrostoma macrostoma

$\frac{27}{10}$ mm long { 0.22
10 mm diam. { $l = 2\frac{1}{2}$ diam

R. $1\frac{1}{4}$ - $1\frac{1}{2}$ lin brachystoma
sem grisei $\frac{31}{12} \frac{32}{13} \frac{29}{10} \frac{35}{14}$ { 0.25-0.28
long

sem crass. $\frac{30}{15} \frac{25}{15} \frac{29}{14} \frac{28}{13} \frac{31}{15}$ { $l = 2\frac{1}{2}$ diam
0.22-0.26

I. cebrennes $\frac{28}{9} \frac{30}{10} \frac{26}{11} \frac{29}{11} \frac{27}{10} \frac{26}{10}$ { $l = 2$ diam
R. $1\frac{3}{4}$ - 2 lin.

I. polycarphaeus minor $\frac{40}{13} \frac{38}{11} \frac{39}{11}$ { 3.0-3.3,
R. 2 - $2\frac{1}{4}$ lin { $l = 3-3\frac{1}{2}$ diam

I. polycarphaeus major $\frac{26}{17} \frac{24}{16} \frac{28}{15} \frac{26}{14}$ { 0.20-0.23
R. $2\frac{1}{4}$ - $2\frac{1}{2}$ lin { $l = 1\frac{1}{2}$ - 2 diam



0 1 2 3 4 5 6 7 8 9 10

cm

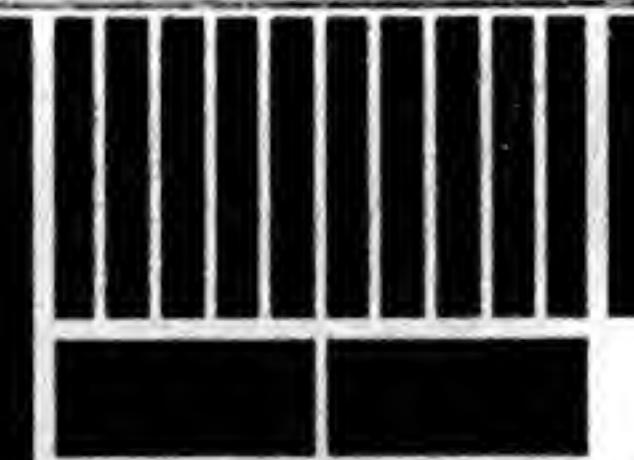
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seminae reticulatae, arcae levae
sem striis, parvis. D. circulata;

longit. culicis rotatae

Scirpoides

Jan 17. 1866

Capitula densa; florae viride;

florae triandri; capsule pyramidata

Scirpoides

capitula minora, staminis sepalis fere aequalibus, filamentis anthers multibulbis

1. sep. ext. breviora, styl. elongata, caps. lagunaria aequalis, exserta ^{longiora} longiora

2. sep. aequalis styl. elongata caps. pyramidata subulata exserta sem. parv. lev.

3. sep. ext. longiora styl. subulata caps. pyramidata aequalis exserta sem. parv. lev.

echinatus 4. sep. ext. longiora styl. subulata caps. pyramidata aequalis exserta sem. major

capitula majora, ^{3 nervia} sepul. ext. longiora, staminis sepalis fere dividit; breviora
filamentis anthers fere duplo majora, styli subulatae; caps. pyramidata
aequalata, aequilonga s. raro parvula exserta, seminae parvi laevolati;

gladiatus capitula majora, ^{3 nervia} sepul. aequilonga, staminis sepalis triandri longiora
filamentis anthers laeviora fere cernente, stylus . . .

capsula pyramidata - connivente, exserta; seminae majora
laevolatae aequilonga

polycephalus capitula magna, sepala 1. nervia ext. longiora, staminis sepalis
dividit viri aequalis; filamenta intera multo longiora, stylus
capsula pyramidata subulata exserta; semina majora
ovata apiculata.



0 1 2 3 4 5 6 7 8 9 10
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BOTANICAL
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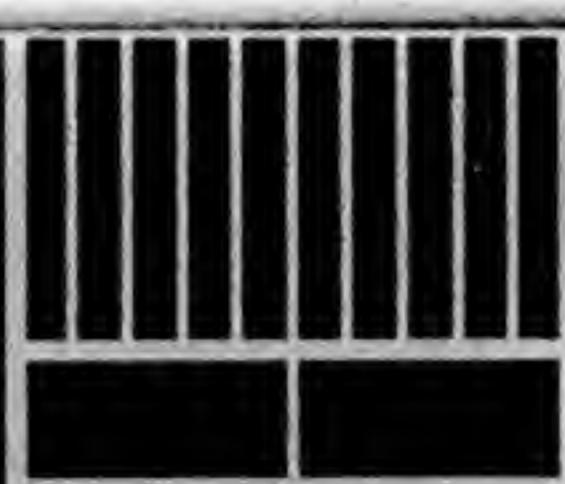
John G. Schüke,

Südwestliche Ecke von Broadway und Morgan Straße,

St. Louis, Mo.

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GENERAL BOTANICAL PAPERS

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I. scirpoides & *echinatus* & *gladiatus* might be united. Jan 17. 1866

I. scirpoides Lam. sepele subulata, 3 nervia
caps. aequalis s. exserta

semina lacerolata utrinq. rotata
pandola stricta foliis a. macrostemonis fl. unib. star sepele aequata
pandola contracta b. echinatus fl. myrs. star sepele dividis brwon
segmentis foliis tenui. c. gladiatus fol. gladiatus. P. anis. diff. fl.

I. polycephala, L. Mich x ex parte.

sepele subulata 1 nervia

capsule exserta

semina ovata abrupte obtuse apiculata



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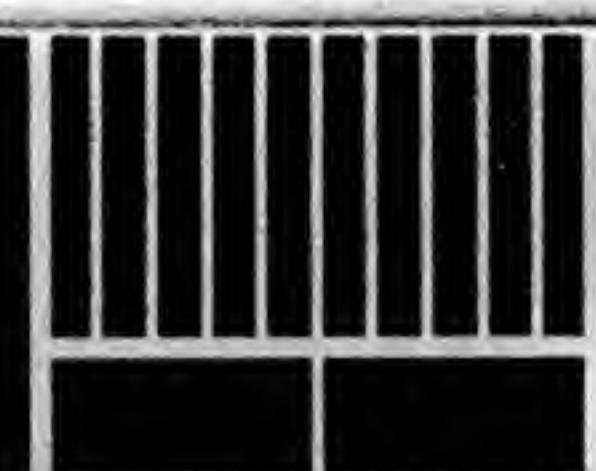


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E. Meyer in Flora M. 370:

Michaux, teste ipso De la Harpe sub nomine
Argia polycephala pone pro I. macrostemonum
intellexit, sed unum alteriusque specimen
ab eo lectum a I. polycephala nonen ignarus
salutatum a I. densiflora pertinet.

What does Meyer here take for densiflora Hook?
At the same place he mentions I. densiflora Hook
(syn. I. polycephala ~~Thunb.~~ Delattre pag 52) as a
Argia like plant? See Knuth in M. 338, who
classifies Meyer for existing distinct species



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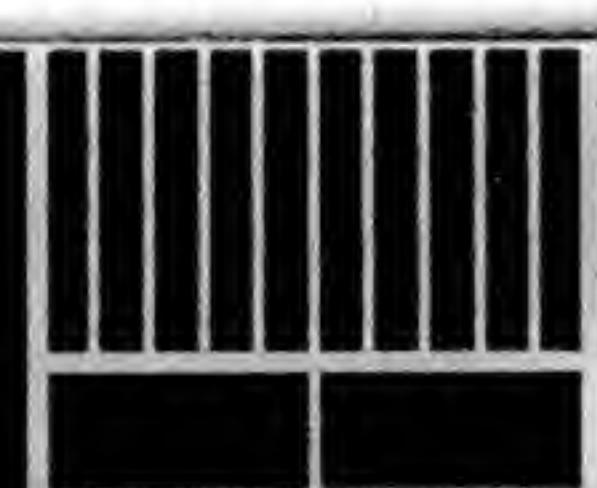


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I. polycephalus Michaux sive *I. macrostemon*
idem est ac *I. scripoides* Lamark de la Harpe
ut super speciebus a Fraser in Carolina
lecto id ab ipsis Lamark manu inscripto
quod in Herbario Lamarkiano nunc Roepeliano
prostet, doctes suu

Nomen scripoides restituendum
I. polycephali, ^{quo auctores} gravissime
abusi sunt, delendu!

E. Meyen in Juss. Chamaiss.
Linnaea III (1828) p. 370



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ALEX. LEITCH,
APOTHECARY & CHEMIST,
Cor. 4th and Olive Sts., St. Louis.



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Pyronia

I. scipio L. α Scipio L. 2
Kunth ~~♂~~ ~~♂~~ ~~♂~~ ?
— ~~♂~~ α 2
Gray α 2
Chapm. α & β 2

I. polycephalus Michx α δ
Dank β α & β 1
All. δ 2
Meyer α β 2
~~Gaigap. Lattaffe~~ δ β ~~2~~
Hooker & Arnst. δ δ Mixture
Chapman. δ 2

I. echinatus Michx (principally) α . 2
All. β . 1
Kunth β ~~2~~

I. macrosternon Gray & Leh. α . 1

I. megacephalus Carter β

I. polycephalus Quat. & α = β ^{'pallidus'}
patternus

δ = ^{Canadensis} _{longicaudata}
 δ nodosus
ep. Hooker & Arnst.
nodosus δ a form of
 \times xiphidium



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